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S/N 10/021,392

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Brian K. Dewey et al.	Examiner:	Truong, Cam Y.T.
Serial No.:	10/021,392	Group Art Unit:	2162
Filed:	December 12, 2001	Confirmation No.	2633
		Docket No.:	14917,415US01/MS164055.1
Title:	METHOD AND SYSTEM FOR PROVIDING ACCESS TO CONSISTENT POINT-IN-TIME FILE VERSIONS		

PROPOSED AMENDMENT

(FOR DISCUSSION PURPOSES ONLY)

1-31. Canceled

32. (Currently Amended) A computer-implemented method, comprising:
receiving a request to locate information corresponding to prior versions of a file or folder;
~~receiving an indication that a filtering process should be performed;~~
in response to the request to locate information, automatically obtaining a set of a plurality of timestamps, each timestamp of the plurality of timestamps corresponding to one of a plurality of shadow volumes that may have a prior version of the file or folder maintained therein, wherein each shadow volume of the plurality of shadow volumes is a different point in time read-only copy of a logical volume at different times, said each shadow volume of the plurality of shadow volumes having a corresponding ~~including a differential file corresponding thereto~~, wherein the obtaining a set of at least one timestamp comprises communicating with at least one remote file server device having at least one shadow volume;
receiving an indication of whether a filtering process for the shadow volumes should be performed;
determining whether the indication indicates that unique file filtering is active;
when unique file filtering is not active, generating a list from the set of timestamps;
when unique file filtering is active;

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for each timestamp in the set, sending a request for file or folder attributes from a corresponding shadow volume by embedding the timestamp as a token in a path such that distributed file server changes at distributed file system junction points do not affect the timestamp;

~~developing~~ generating a list of timestamps based on each response to the request for file or folder attributes, each entry in the list indicative of the accessibility of the file or folder associated with each entry, wherein the request for file or folder attributes comprises setting a special parsing bit in a header of the request such that the request is flagged and the remote file server detects the embedded timestamp; and

~~in response to receiving the indication that a filtering process should be performed,~~ filtering from the generated list of timestamps an entry of a prior version of the file that is not unique with respect to another prior version of the file already represented in the list; and

~~providing prior file or folder version information and accessibility of the prior file or folder versions based on the~~ filtered list in response to the request to locate information, such that the information enables retrieval of a corresponding version of a file or folder in the filtered list, and wherein selection of a prior version of the file replaces the most current version of the file.

33. (Original) The method of claim 32 wherein receiving a request to locate information comprises receiving an API call.

34. Canceled

35. (Currently Amended) The method of claim 32 wherein requesting file or folder attributes from the corresponding volume comprises, identifying the shadow volume via its corresponding timestamp in the request.

36-38. Canceled

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39. (Currently Amended) The method of claim 32 wherein ~~developing~~ generating a list of timestamps comprises, determining from the response to the request for file or folder attributes whether the file or folder exists on the shadow volume identified via a timestamp, and if so, including an entry representing the corresponding timestamp in the list.

40-46. (Canceled)

47. (New) A computer storage medium storing instructions that when executed by a computer cause a computer to:

receive a request to locate information corresponding to prior versions of a file or folder;
in response to the request to locate information, automatically obtain a set of a plurality of timestamps, each timestamp of the plurality of timestamps corresponding to one of a plurality of shadow volumes that may have a prior version of the file or folder maintained therein, wherein each shadow volume of the plurality of shadow volumes is a different point in time read-only copy of a logical volume at different times, said each shadow volume of the plurality of shadow volumes having a corresponding, wherein the obtaining a set of at least one timestamp comprises communicating with at least one remote file server having at least one shadow volume;

receive an indication of whether a filtering process for the shadow volumes should be performed;

determine whether the indication indicates that unique file filtering is active;
when unique file filtering is not active, generate a list from the set of timestamps;
when unique file filtering is active:

for each timestamp in the set, send a request for file or folder attributes from a corresponding shadow volume by embedding the timestamp as a token in a path such that distributed file server changes at distributed file system junction points do not affect the timestamp;

generate a list of timestamps based on each response to the request for file or folder attributes, each entry in the list indicative of the accessibility of the file or folder associated with each entry, wherein the request for file or folder attributes comprises setting a special parsing bit in a header of the request such

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that the request is flagged and the remote file server detects the embedded timestamp; and

filter from the generated list of timestamps an entry of a prior version of the file that is not unique with respect to another prior version of the file already represented in the list; and

provide the filtered list in response to the request to locate information, such that the information enables retrieval of a corresponding version of a file or folder in the filtered list, and wherein selection of a prior version of the file replaces the most current version of the file.

48. (New) The computer storage medium of claim 47 wherein receive a request to locate information comprises receiving an API call.

49. (New) The computer storage medium of claim 47 wherein request file or folder attributes from the corresponding volume comprises, identifying the shadow volume via its corresponding timestamp in the request.

50. (New) The computer storage medium of claim 47 wherein generate a list of timestamps comprises, determine from the response to the request for file or folder attributes whether the file or folder exists on the shadow volume identified via a timestamp, and if so, including an entry representing the corresponding timestamp in the list.

51. (New) A computing device configured to:
receive a request to locate information corresponding to prior versions of a file or folder;
in response to the request to locate information, automatically obtain a set of a plurality of timestamps, each timestamp of the plurality of timestamps corresponding to one of a plurality of shadow volumes that may have a prior version of the file or folder maintained therein, wherein each shadow volume of the plurality of shadow volumes is a different point in time read-only copy of a logical volume at different times, said each shadow volume of the plurality of shadow volumes having a corresponding, wherein the obtaining a set of at least one timestamp comprises communicating with at least one remote file server having at least one shadow volume;

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receive an indication of whether a filtering process for the shadow volumes should be performed;

determine whether the indication indicates that unique file filtering is active;

when unique file filtering is not active, generate a list from the set of timestamps;

when unique file filtering is active:

for each timestamp in the set, send a request for file or folder attributes from a corresponding shadow volume by embedding the timestamp as a token in a path such that distributed file server changes at distributed file system junction points do not affect the timestamp;

generate a list of timestamps based on each response to the request for file or folder attributes, each entry in the list indicative of the accessibility of the file or folder associated with each entry, wherein the request for file or folder attributes comprises setting a special parsing bit in a header of the request such that the request is flagged and the remote file server detects the embedded timestamp; and

filter from the generated list of timestamps an entry of a prior version of the file that is not unique with respect to another prior version of the file already represented in the list; and

provide the filtered list in response to the request to locate information, such that the information enables retrieval of a corresponding version of a file or folder in the filtered list, and wherein selection of a prior version of the file replaces the most current version of the file.

52. (New) The computing device of claim 51 wherein receive a request to locate information comprises receiving an API call.

53. (New) The computing device of claim 51 wherein request file or folder attributes from the corresponding volume comprises, identifying the shadow volume via its corresponding timestamp in the request.

54. (New) The computing device of claim 51 wherein generate a list of timestamps comprises, determine from the response to the request for file or folder attributes whether the file

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or folder exists on the shadow volume identified via a timestamp, and if so, including an entry representing the corresponding timestamp in the list.